

A DOZEN PEARLS:

Exploring Some Facts and Fictions of Prematurity

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**1. The leading cause of
infant death in the US is**

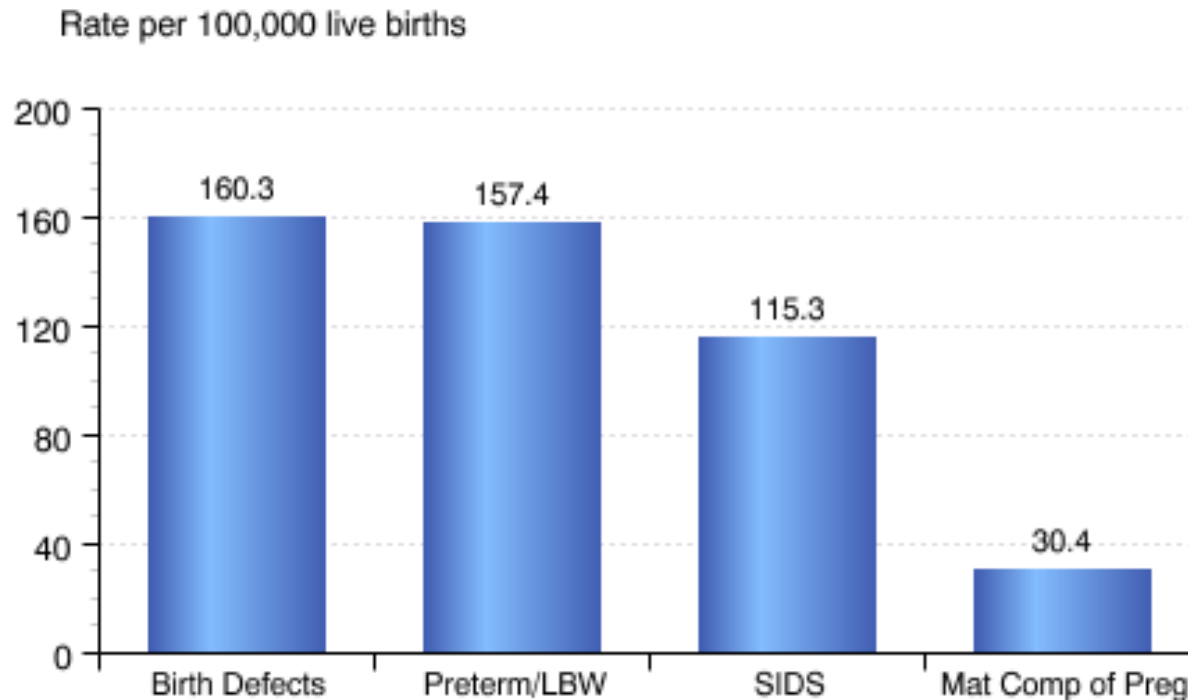
_____.

Cause of Death, US

1. Birth defects
2. Low birthweight/prematurity
3. SIDs

Cause of Death, Kansas, 2002

Kansas, 2002



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SIDS is Sudden Infant Death Syndrome. RDS is Respiratory Distress Syndrome. "Mat Comp of Preg" stands for "Maternal Complications of Pregnancy." Cause of death for 1996-1998 is based on the Ninth Revision, International Classification of Diseases (ICD-9); cause of death for 1999-2001 is based on the Tenth Revision, International Classification of Diseases (ICD-10).

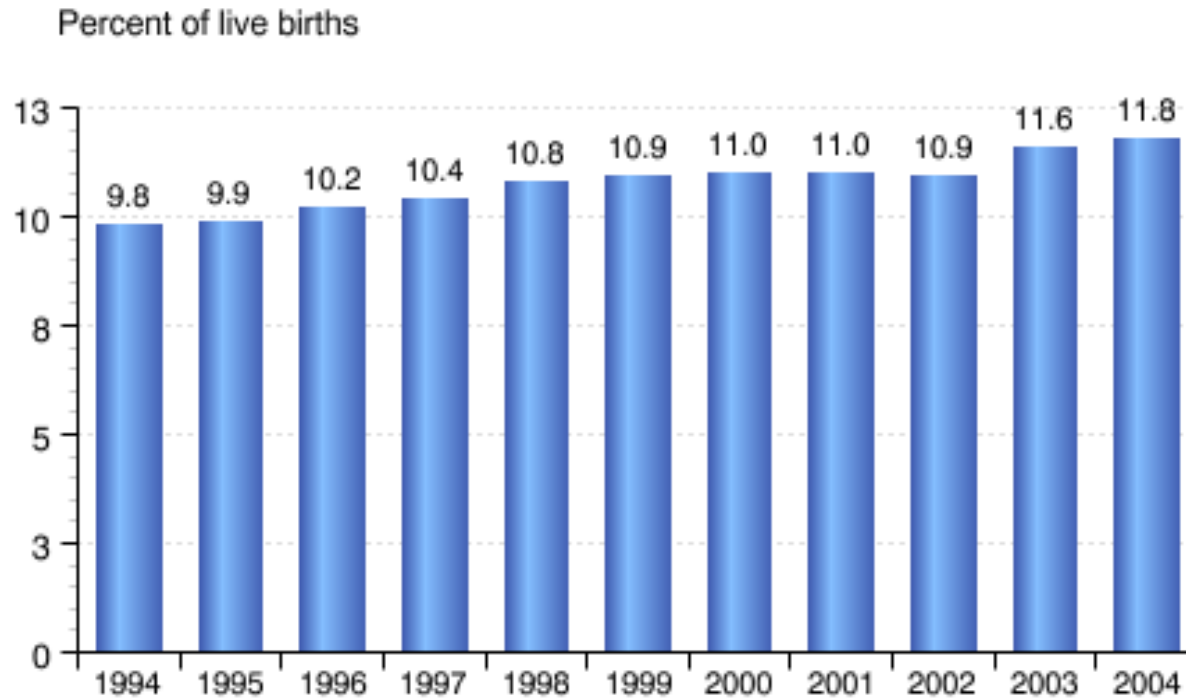


**2. The prematurity rate
has been stable for the
last 20 years**

- 12% of all pregnancies in the US end in preterm birth.

Kansas Prematurity Trends

Kansas, 1994-2004



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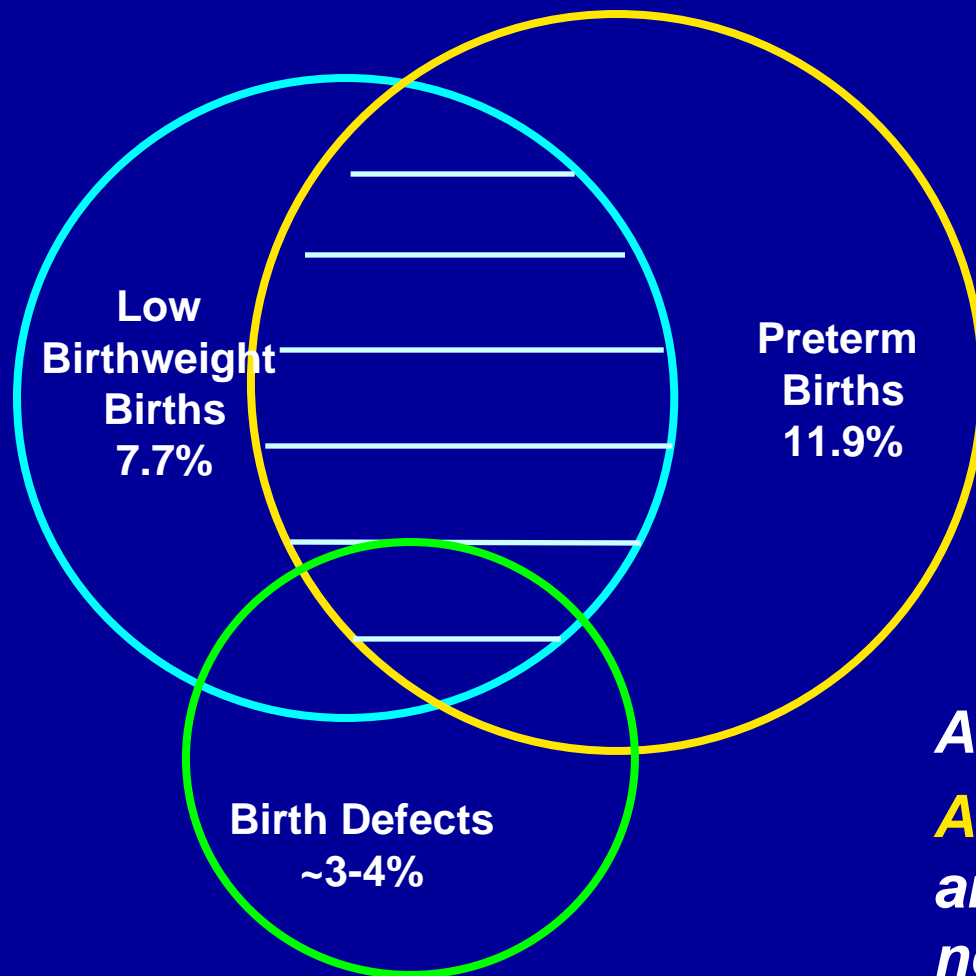
Preterm is less than 37 completed weeks gestation.

- Preterm birth is responsible for 70% of perinatal deaths and 50% of long term neurologic morbidity.

. . .can preterm birth and low birth weight be used interchangeably?

Not really. . .

- LBW/VLBW about 30% lower than PTD



Among LBW: 2/3 are preterm
Among preterm: almost 50% are LBW (some preterm are not LBW)

- The overlap is large
 - 64% of LBW infants preterm
 - 95% of VLBW infants preterm

- LBW < 2500 gms
- VLBW < 1500 gms
- ELBW < 750 gms

Rate of Preterm, Low Birth Weight and Very Low Birth Rate 1994-2004

	Preterm	LBW	VLBW
1994	9.8	6.5	1.4
1997	10.4	6.9	1.2
2000	11.0	6.9	1.4
2004	11.8	7.3	1.4
2010 (goal)	7.6	5.0	0.9

3. Because of the amazing success of the NICUs in saving small babies, the energy to prevent prematurity can be lessened.

4. The reasons for premature labors and deliveries are well understood.

- Reasons for Premature Birth
 - Iatrogenic (~25%)
 - PPROM (~25%)
 - Idiopathic (~50%)

- Four Main Causes of Idiopathic Prematurity

- Infection
- Intrauterine bleeding
- Overstretching
- Preactivation of normal labor initiators for often unknown reasons

5. Risk factors predict the majority of women who will have premature labor.

6. Fetal Fibronectin testing is far better at predicting who won't deliver than who will.

Fetal Fibronectins

- Glycoproteins found in plasma
- Produced during fetal life
- Appear in cervical canal early and then again late in pregnancy
- 1991 Lockwood: appearance between 24-34 weeks predicts preterm labor

Understanding:

- **Positive Predictive Value (PPV)**
- **Negative Predictive Value (NPV)**

- Fetal Fibronectin
 - PPV → 25-40%
 - NPV → 95%

7. Various educational venues, including media presentations, public service announcements and professional encounters have had a large impact on the public's awareness and knowledge of prematurity.

8. Since there is little that can be done to stop pre-term contractions, early detection is of little consequence.

Benefits of Early Identification

- Transfer to high risk center
- Administration of glucocorticoids
- Treatment of infections

9. Progesterone injections or suppositories have been proven effective in preventing pre-term delivery for some women.

- Risk of recurrence of PTD 15-62%

Multicenter MFMU Trial

Women at risk for PTD because of previous PTD treated with 17 alpha hydroprogesterone corproate had recurrence rate of 36.3% . . .

**. . .compared to 54.9% for
placebo group**

**10. The risk for PTB
increases in women who
have had LEEP**

Women who have had LEEP (Nova Scotia)

7.9% PTB (vs. 2.5 in control group)

OR=3.5

3.5% PPRM (vs 0.9%)

OR=4.1

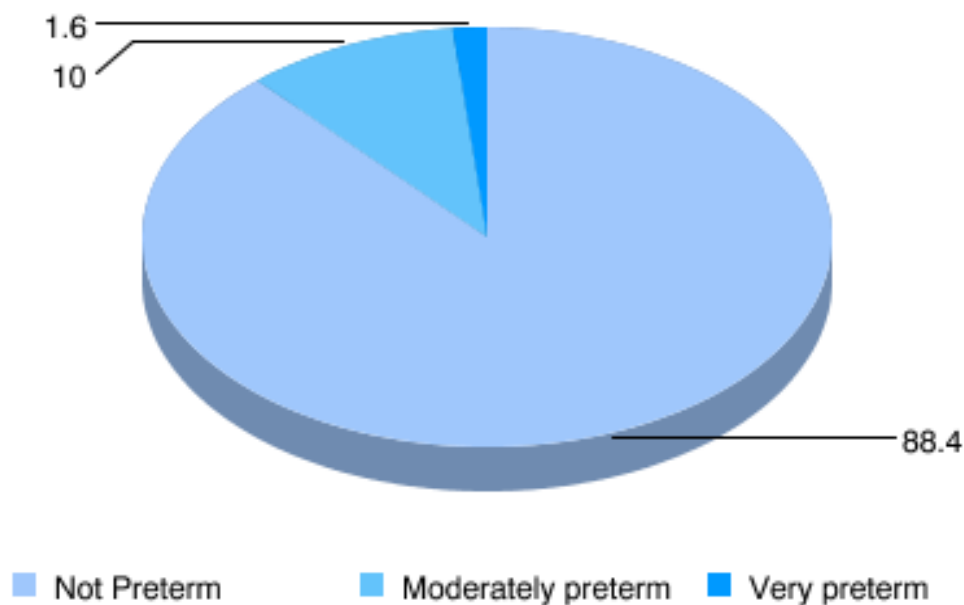
Increase <34 wk gestational age n/s

11. The near term (34-37 wk) infant is at low risk for short & long term morbidities.

Distribution Kansas Preterm Births

Kansas, 2003

Percent of live births



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Not preterm is greater than or equal to 37 weeks gestation. Preterm is less than 37 completed weeks gestation. Very Preterm is less than 32 completed weeks gestation. Moderately preterm is 32-36 weeks of gestation.



- Risks for near term infant
 - Hyperbilirubinemia
 - Respiratory distress
 - Feeding challenges
 - Hypoglycemia
 - Apnea & bradycardia
 - Neurodevelopmental delay

12. Since prevention opportunities seem limited, nurses and others have little to offer in the prevention of premature labor or its consequences for the infant.

Take Home Message:

- **All pregnant women are at risk for preterm labor and birth**

- Educate the women, families and public at large about why prevention PTB & LBW important goals for every pregnancy

Educate all women about

- Preterm birth
- Signs and symptoms
- Actions to take

- Eliminate the term
Braxton Hicks from your vocabulary
(and everyone else's too!)

- Use evidence based strategies for smoking cessation

Use the “5 A” Approach

- Ask
- Advise
- Assess
- Assist
- Arrange

It's an Evidence-Based approach—Learn it
and Use it!!

- Assess for domestic violence

- Encourage recommended weight gain

- Look for signs and symptoms of infection

- Encourage community involvement, especially in the workplace

- Encourage continuity of care

- Provide each woman with complaints suggestive of PTL with positive reinforcement.

- Stay Current

- Stay Curious!!

A black and white photograph showing a close-up of a baby's feet being gently held by an adult's hands. The adult's fingers are visible, supporting the baby's feet from underneath. The baby's feet are small and have visible toes. The background is out of focus, showing more of the adult's hands and the baby's legs.

Life is in your hands!!